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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/763,163

03/29/2001

Guizeng Shi

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10/19/2004

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EXAMINER

ALEXANDER, JESSE NELSON

ART UNIT

PAPER NUMBER

2666

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/763,163

Applicant(s)

SHI ET AL.

Examiner

Jesse N. Alexander

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/29/01 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/763163, filed on 03/29/2001.

Information Disclosure Statement

2. The information disclosure statement filed 2/16/2001 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Oath/Declaration

3. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
The clause regarding "willful false statements ..." required by 37 CFR 1.68 has been omitted.

Specification

4. The disclosure is objected to because of the following informalities: title of application appears below the heading "DESCRIPTION". It should be removed.

Appropriate correction is required.

Drawings

5. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

6. Claim 2 is objected to because of the following informalities: the word "to" should be placed between the words "allocated" and "the" in line 6. Appropriate correction is required.
7. Claim 19 is objected to because of the following informalities: the word "one" should be plural in line 5. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "situation" is used in claims 1, 16, 17, 18, 19. The term is indefinite because the specification does not clearly define the term.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1, 16, 17-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Basu et al. (US 6,097,733 A).

13. **Regarding Claims 1, 16, 17, and 19**, Basu et al. discloses a wireless communication apparatus (**mobiles 104a-c and base station 102 in fig. 1**) comprising: monitoring means for monitoring (**allocation means or bandwidth allocator monitors**

the data flow or each user or mobile terminal in the step in fig. 9, element 902) for each unit frame a situation of transmission queuing cell in each of uplink storing means (fig . 5, element 524) and downlink storing means (fig . 5, element 512) for each of a plurality of communication users; and allocating means for allocating a unit sub-slot to each transmission queuing cell (fig . 5, element 506 allocates bandwidth in the form of TDMA time slots see col. 2, lines 49-54) for each unit frame based on an entire situation of the storing means (the situation is the bandwidth requirements for each of the services (i.e. voice or data) that the mobile terminal is using see col. 11, lines 1-11).

Regarding Claim 18, Basu et al. discloses the communication terminal apparatus (mobile station element 104a-c), wherein the communication terminal apparatus reports a situation of transmission queuing cell to the base station **(the situation of the terminal requests voice or data service as step 701 in figure 7).**

Regarding Claim 20, Basu et al. discloses the wireless communication method (fig. 9) further comprising: performing a comparison between the total number stored particular transmission queuing cells and a threshold for each storing means (col. 14, lines 38-42); and performing an allocation corresponding to a result of the comparison (fig. 9, elements 914, 906)

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Basu et al. (US 6,097,733 A) in view of Hung et al. (US 6,353,618 B1).

Regarding Claims 2 and 3, Basu et al. discloses the wireless communication apparatus wherein the allocating means allocates unit sub-slots (fig . 5, element 506 allocates bandwidth in the form of TDMA time slots see col. 2, lines 49-54).

Basu et al. also discloses the wireless communication apparatus according to claim wherein the constant regulation includes a regulation (**element 506, fig. 5**) such that the unit sub-slot is fairly allocated (**according to the method shown in fig. 9**) to each transmission queuing cell stored in each storing means (**fig. 5, elements 512 and 524**) and the transmission queuing cell allocated the unit sub-slot is deleted from the storing means (**deletion of surplus or unused bandwidth in the form of TDM slots, see col. 2, lines 49-54 in step 912.**).

However, Basu et al. fails to explicitly teach the wireless communication apparatus, wherein the allocating means allocates unit sub-slots of which the number is in a range that the unit frame capable of storing, according to a constant regulation.

Hung et al. teaches the concept of scheduling queued sub-slots onto an outgoing scheduling frame (element 18, of fig. 2. and col. 6, lines 14-16) of fixed length regulated by an arbiter in fig. 2, element 10.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of Basu et al. with those of Hung et al. such that bandwidth is allocated in the form of sub-slots or timeslots within frames according to a constant regulation. The motivation to combine these teachings would have been to insure the most efficient usage of available bandwidth in the form of timeslots within fixed length frames as taught by Hung et al.

Allowable Subject Matter

16. Claims 4-15, 21,22, 23, would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: The aforementioned claims are allowable over prior art of record since the cited references taken individually or in combination fails to particularly disclose wireless communication apparatus according to claim wherein the constant regulation includes a regulation such that a first circulation is repeated such that at an allocation occasion for each of the uplink storing means and the downlink storing means for each communication user, the unit sub-slot allocated to a transmission queuing cell with a longest transmission queuing time stored in each storing means.

14. It is noted that the closest prior art Hung et al. teaches a weighted round robin arbiter, in figure 2.

However Hung et al. fails to explicitly teach or render obvious the above underlined limitations as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

17.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to show the state of the art of telecommunications traffic management for controlling traffic flows in wireless packet-switched networks.

- US-2001/0021197 09-2001 Foore et al.
- US-6,097,733 A 08-2000 Basu et al.
- US-5,598,417 A 01-1997 Crisler et al.
- US-5,946,306 A 08-1999 Talarino, Reino
- US-6,111,863 08-2000 Rostoker et al..


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19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jesse N. Alexander whose telephone number is (571) 272-3167. The examiner can normally be reached on 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jna3


RICKY NGO
PRIMARY EXAMINER